POSTURE IN OBSTETRICS

by

K. Bhasker Rao, M.D.,

Professor of Obstetrics and Gynaecology,
Madras Medical College, Madras-3
Obstetrician and Gynaecologist, Institute of Obstetrics and Gynaecology,
Govt. Hospital for Women and Children, Madras-8.

History of obstetrics is as ancient as that of mankind itself. In the course of this history, the posture adopted by the parturient varied in different countries at different times. Even in the same country, due to certain factors, obstetric posture might have remarkably changed in the course of a few centuries from a primitive one of squatting to that of dorsal or recumbent attitude.

In India it appears that even from the Rig Vedic days, about 1500 B.C., the dorsal posture has been adopted (Mukerjee, 1944). During the Samhita period, both the great authorities, Charaka and Susruta, recommended this posture to a woman in labour. Charaka advised that during labour, "she should lie on a soft bed placed on the ground, stretching out her arms and legs now and again. When the head descends, she is placed on a bedstead and directed to strain". Mukhopadhyaya (1913) states that wooden bedsteads were used for delivery in ancient India. In Susruta Samhita (Sarirastana 10: 6 and 7) the description, however, is fairly clear: "she is laid on her back in a soft bed with her head resting on a pillow and legs slightly flexed and drawn up. Four elderly ladies with paired finger nails and skilled in art of delivery and in whom she has confidence should attend on her". From Majjima Nikaya (iii, 118), an ancient Buddhist text, it appears that the usual posture during delivery in that era was the lying-down or sitting; but "Bodhisatta's mother gave birth to her child standing erect", emphasising that this posture was unusual. Nativity of the Buddha at Lumbini in 623 B.C. has been the subject of numerous remarkable paintings and sculptures, depicting the delivery of the divine child from the right side of Mahamaya (Buddha's mother). She is usually shown standing, holding on to a branch of a Sal tree, supported on her left side by her sister, Prajapathi (Vijayatunga 1956).

In China also, it appears, that from early times the supine posture was adopted during labour and, only occasionally, in the second stage the patient used to obtain support by means of bamboo rods suspended from the ceiling but within reach of her bed on the floor (Lee Tao, 1958).

Squatting posture, however, was probably the earliest one used by a

woman during labour as she could thus strain best and most effectively. Sigerist (1951) narrates how in ancient Egypt a woman in labour would retire into a corner of her house after summoning 2 women, relatives or neighbours. Two statues of deities would be kept there to protect her. She would then sit on her heels, on 2 or 4 bricks or flat stones, with space beneath her for the delivery of the baby. One woman would hold her back when the other knelt in front to receive the child. At that time the term, "to sit on bricks" was synonymous "to give birth to". The bricks were later replaced by a stool, as mentioned in Pharoah's edict to the midwives (Exodus 1: 16), "when you deliver Hebrew women and you notice on the stools a male child".... From the Bible (Genesis 30: 3 and 50: 23) it is seen that the practice in those days was for the parturient to be supported or seated on the lap of an attendent, husband or any other relative (Brim, 1936).

The custom of delivery on a stool spread from Egypt, not only to middle-east but also to the continent, Asia and far eastern countries. Even in ancient Peru, the fashion was to deliver on the stool, supported by her husband from behind and the midwife in front (Dalrymple-Champneys, 1958). There is evidence to show that even in North-America stools and later obstetric chairs were used (Mengert, 1956). Thompson (1957) in an essay on the parturition chair has traced the origin, growth, distribution and varieties of obstetric stools or chairs. Even at the time of Renaissance mostly stools were used for delivery. Roeslin (1513) described a simple semicircular stool not higher than 2 feet and claimed it as a suitable posture so that the patient could breath freely than in the recumbent attitude. Jacob Reff (1554) in his book "De conceptu et generatione Hominis" advises use of cushion chairs for his patients so as to avoid maternal or foetal injury. He suggested that there should be one person to support her from behind, two for standing on either side to encourage her and the midwife could sit in front on a low stool with "her hands anointed with oil of lilies and sweet almonds mixed with chicken fat". Handgrips and foot holds were later added to help the patient in straining. Some were well cushioned and provided with arms and back rests, etc., and could be converted after delivery into a cot—a sort of a "slumberette". In Syria, there were chairs in which patient could rock herself, if necessary. Some of these chairs are preserved in the museums of medical history.

In England, at the time of William Harvey (1578-1657) obstetric stool was popular. But in the days of Smellie (1697-1763) it had fallen into disuse, for he had never used nor seen one though he had heard of it being used by the midwives in the countryside. In his time, patients were delivered in lateral posture preferably on the left side. It is probable that in the early part of the eighteenth century, after the advent of man-midwives, the stools were abandoned and the "indelicate" squatting attitude was given up in favour of left lateral or recumbent one. Though Exton (1751) has been credited with the introduction of this posture by the French author Witkowsky, there is ample proof that it

woman during labour as she could thus strain best and most effectively. Sigerist (1951) narrates how in ancient Egypt a woman in labour would retire into a corner of her house after summoning 2 women, relatives or neighbours. Two statues of deities would be kept there to protect her. She would then sit on her heels, on 2 or 4 bricks or flat stones, with space beneath her for the delivery of the baby. One woman would hold her back when the other knelt in front to receive the child. At that time the term, "to sit on bricks" was synonymous "to give birth to". The bricks were later replaced by a stool, as mentioned in Pharoah's edict to the midwives (Exodus 1: 16), "when you deliver Hebrew women and you notice on the stools a male child".... From the Bible (Genesis 30: 3 and 50: 23) it is seen that the practice in those days was for the parturient to be supported or seated on the lap of an attendent, husband or any other relative (Brim, 1936).

The custom of delivery on a stool spread from Egypt, not only to middle-east but also to the continent, Asia and far eastern countries. Even in ancient Peru, the fashion was to deliver on the stool, supported by her husband from behind and the midwife in front (Dalrymple-Champneys, 1958). There is evidence to show that even in North-America stools and later obstetric chairs were used (Mengert, 1956). Thompson (1957) in an essay on the parturition chair has traced the origin, growth, distribution and varieties of obstetric stools or chairs. Even at the time of Renaissance mostly stools were used for delivery. Roeslin (1513) described a simple semicircular stool not higher than 2 feet and claimed it as a suitable posture so that the patient could breath freely than in the recumbent attitude. Jacob Reff (1554) in his book "De conceptu et generatione Hominis" advises use of cushion chairs for his patients so as to avoid maternal or foetal injury. He suggested that there should be one person to support her from behind, two for standing on either side to encourage her and the midwife could sit in front on a low stool with "her hands anointed with oil of lilies and sweet almonds mixed with chicken fat". Handgrips and foot holds were later added to help the patient in straining. Some were well cushioned and provided with arms and back rests, etc., and could be converted after delivery into a cot—a sort of a "slumberette". In Syria, there were chairs in which patient could rock herself, if necessary. Some of these chairs are preserved in the museums of medical history.

In England, at the time of William Harvey (1578-1657) obstetric stool was popular. But in the days of Smellie (1697-1763) it had fallen into disuse, for he had never used nor seen one though he had heard of it being used by the midwives in the countryside. In his time, patients were delivered in lateral posture preferably on the left side. It is probable that in the early part of the eighteenth century, after the advent of man-midwives, the stools were abandoned and the "indelicate" squatting attitude was given up in favour of left lateral or recumbent one. Though Exton (1751) has been credited with the introduction of this posture by the French author Witkowsky, there is ample proof that it

was first recommended 9 years earlier by Fielding Ould (1710-1789), the Second Master of Rotunda (Spencer, 1927). It soon became popular all over Great Britain. Ramsbotham (1844) considered it as the most convenient and easy posture and best adapted for the descent of the head through the pelvic brim. Patient lies on the left side with shoulders inclined forwards, spine slightly curved with thighs flexed on the pelvis and legs bent on thighs. In this posture, according to him, the pelvic axis is brought into line with foetal axis and there is more "laxity of the muscles over the brim, especially the psoas, than in any other." Playfair (1884) was so much convinced about the usefulness of this posture that he wrote that "it would be useless to attempt on any other." In this position, coccyx is more free and maximum anteroposterior diameter is available at the pelvic outlet. He cited an incidence of 37.6% of perineal injuries in the dorsal position (which was the custom over the Continent—especially in France and Germany) when compared to 24.4 per cent in other positions, as the force would be directly borne by the perineum in the supine position. Ramsbotham mentioned that in the early 19th century, the peasantry in Ireland placed themselves on their hands and knees during labour and that in Cornwall it was difficult to persuade a parturient to adopt any other position than either standing or kneeling. Ould performed version and also applied forceps with the patient in the kneeling position (Spencer, 1927).

In 1845, Sims found the left lateral position as most convenient to correct the retrodisplaced uterus and as he adopted this posture again for repair of vesico-vaginal fistula, it has been named after him, though in Obstetrics this posture has been in use for well over 100 years earlier in England. In 1773, Charles White suggested that during puerperium lochial drainage is better if the patient lies in bed with head and shoulders raised and gets out of it on the first day and micturates in the kneeling posture. Till introduction of chemotherapeutic agents and antibiotics this advice was valid.

Walcher (1889) claimed that when the buttocks of a patient are brought to the edge of the table and her legs are allowed to hang down without any support there is a slight increase in the conjugate diameter of the inlet caused by rotation of the innominate bones over the sacrum. Ricci (1950) has now pointed out that the originator of this posture is really Albuccasis (936-1013 A.D.), the famous Arab physician. An illustration of what is now called the Walcher's position is also seen in an obstetric text published by Scipione Mercurio in 1596. This Italian obstetrician recommended the recumbent posture for a fatigued patient and sitting posture for those "in good spirits."

The exaggerated lithotomy position was favoured by Williams in 1911 as it helps in increasing the conjugate diameter of the outlet by 1 to 2.5 cms. This work has been subsequently confirmed by Thoms (1958) and also by Barrel and Fernstrom (1957). It has been pointed out, however, by Brill and Darnelius (1941) that this posture reduces obstetric conjugate when compared

with its dimensions in normal dorsal position.

Thus we could see that various postures from standing, kneeling, squatting to a lying down posture, supine or lateral, have been used to deliver women during childbirth. What is the posture accepted today as suitable for delivering a patient in labour? The stool, of course, has been discarded except for the obstetrician to sit on. The squatting posture is believed to increase the pelvic outlet and permits the patient to utilise the secondary forces to the full. But in a civilised country, this posture is considered rather "indecent" during labour and cannot possibly be assumed for any appreciable period by a patient today who usually demands and gets sedatives to relieve her pain. Walcher's position has been given up as it is most awkward, tiresome and of questionable benefit. The Trendelenberg position is used for treatment in cases of cord prolapse. (The knee-elbow posture is recommended for retroverted gravid uterus but is rarely followed by the patients). Lithotomy position is used only for operative vaginal delivery. About the left lateral position, Great Britain is probably the only country where it is being practised. Even here, the dorsal position is becoming popular. An eminent British obstetrician, Munro Kerr (1956) enumerates eight sound reasons to claim that dorsal position is more advantageous.

Dorsal position is therefore perhaps the best and most convenient position to be adopted during labour. At least, in our country as we have seen earlier, it has stood the test of time.

References

1. Barrel V. & Fernstrom I: Obst. Gyn. Surg ; 12, 646, 1957.
2. Brill and Darnelius: Am. J. Obst. Gyn.; 42, 821, 1941.
3. Brim C. J.: Medicine in the Bible, Publ. Froben Press, New York; 182, 1936.
4. Charaka Samhita: English Translation by Avinashchandra, Vol. I, Calcutta; 450, 1880.
5. Dalrymple-Champneys W.: Proc. Roy. Soc. Med.; 51, 385, 1958.
6. Lee Tao: Chinese Med. J.; 77, 477, 1958.
7. Majjima Nikaya (Translated from Pali) by Lord Chalmers, Oxford Univ. Press, London; 225, 1927.
8. Mengert W. F.: Obst. Gyn.; 7, 353, 1956.
9. Mukherjee M. K.: Text Book of Ayurveda — History of Ayurveda, Madras, 1944 edn.
10. Mukhopadhyya G.: The Surgical Instruments of the Hindus; Vol. I, Calcutta University Press, 1913.
11. Munro Kerr J. M.: Operative Obstetrics; Bailliere Tindell & Co., London, 40, 1956.
12. Playfair W. S.: Treatise on Midwifery; Smith, Edler and Co., London; 338, 1884.
13. Ramsbotham F. H.: Principles and Practice of Parturition; John Churchill, London; 122, 1844.
14. Ricci J. V.: The Geneology of Gynaecology; The Blakiston Co., Toronto; 193, 1950.
15. Sigerist H. E.: History of Medicine; Vol. I, Oxford University Press, New York; 164, 1951.
16. Spencer H. R.: History of British Midwifery, 1650-1800; John Bale Sons and Davidson, London; 42 and 164, 1927.

17. Susruta Samhita: English Translation by Kunjalal Bhishagrathna; Vol. II, Calcutta; 1907.
18. Thompson C. J. S.: Side lights on History of Medicine; Edited by 2. Cope, Butterworths, London; 65, 1957.
19. Thoms M.: Pelvimetry; Hoeber-Harper, New York; 23, 1958.
20. Vijayatunga J.: Lumbini, Publication Division, Ministry of Information and Broadcasting, New Delhi; 1956.
21. Williams: Quoted by Stander J. H. Text book of Obstetrics; Appleton Century Crofts, New York, 238, 1945.